

## ON SOME JAMAICAN TRIATOMINAE AND EMESINAE

(REDUVIIDAE: HEMIPTERA)

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The Reduviid material treated in this paper includes five new records from Jamaica, the description of a new species of *Nesotriatoma* Usinger 1944, the description of the allotypes of *Ghilianella spinicaudata* Maldonado and *Ploiaria umbrarum* McAtee and Malloch, and new locality records for a number of species.

Gowdy (1926) in his *Catalogus insectorum Jamaicae*, listed only two Emesinae, *Emesa mantis* (F) and *Ploiaria rufoannulata* (Bergroth), and two Triatominae, *Triatoma rubida* Uhler and *T. rubrofasciata* (DeGeer). *Ploiaria umbrarum* McAtee and Malloch, *Ghilianella signoreti* (Dohrn), *G. spinicaudata* Maldonado and *G. spinata* Maldonado have been described from Jamaica. The other species treated here are new records. The political subdivision Parish is abbreviated as P. throughout the remainder of the paper. We are indebted to Dr. R. L. Usinger for the loan of a specimen of *Nesotriatoma flavida*.

## Subfamily PLOIARIINAE

*Emesa mantis* (Fabricius) 1794

*Material examined* (collected by T. H. Farr): One ♂ and one ♀, August 1954, from Second Breakfast Spring, St. Andrews. One ♀, May 1955; one ♀, June 1956; one ♂ and one ♀, July 1956; one ♂, September 1958; one ♂, April 1960; one ♂, October 1960; all from Long Mountains in St. Andrews Parish. Two ♂♂, August 1955; one ♂, July 1960; from Trelawny P. One ♂, August 1954, west bank of mouth of Río Grande; one ♀, July 1955, one mile east of Caledonia Peak; Portland P. One ♀, August 1954, two miles north of Golden Grove; one ♂, July 1953, from St. Thomas P. Collected from spider webs on steep rock walls, one specimen collected while feeding on a spider, exuviae often found on the webs.

*Emesopsis nubilus* Uhler 1893

*Material examined*.—One ♀, March 1954, Swallowfield; one ♀, November 1954, and one ♀, September 1954 from Cross Roads; all from St. Andrew P. One ♂ November 1957, Ocho Rios, St. Ann P.

*Empicoris rubromaculatus* (Blackburn) 1889

*Material examined*.—One ♀, March 1954, C. B. Lewis, collector, Upper Mountain View, St. Andrew P.

*Empicoris armatus* (Champion) 1898

*Material examined*.—One ♂, April 1960, Portland Ridge, Clarendon P., T. H. Farr collector.

***Empicoris errabundus* (Say) 1832**

*Material examined*.—Three ♀♀, as follows—January 1960, Marces Gap, St. Andrew P., and December 1959, Morant Bay, T. H. Farr collector; December 1960, Cockpit country, T. H. Farr and J. Maldonado collectors.

***Ploiaria rufoannulata* (Bergroth) 1911**

*Material examined*.—One ♀, October 1957, Rio Cobre Gorge, St. Catherine P.; one ♂ and one ♀, May 1955, and one ♀, July 1954, Port Henderson. One ♀, January 1960, one-half mile south of Portland Cottage, Clarendon P. One ♀, September 1954, Wilson's Run, Trelawny P. One ♂ and one ♀, January 1955, two miles southwest of Ecclesdown, Portland P.; one ♀, July 1958, Hardwar Gap, Portland P.

***Ploiaria umbrarum* McAtee and Malloch 1925**

Jamaica, holotype male

*Female*.—Head, thorax, front legs, beak, and abdomen to about middle brownish; abdomen gradually darker caudad. Lateral margin of mesonotum white. Antenna and midleg brownish, unmarked; hind legs with femur apically and tibia basally conspicuously white. Wings with light brownish veins, whitish, without distinctive markings.

Head to apex of antennal socket, slightly longer than head across eyes (15:13); eyes from above one and one-half times as broad as interocular space. Anterior lobe with a short median carina anteriorly to interocular depression. Relative length of antennal segments: 80:65:20:15; the first segment slightly longer than length of body. Relative lengths of beak: 18:18:22. Fore coxa slightly longer than fore tibia (34:27); two-thirds of fore femur (34:50). Trochanter with a long anteriorly directed slightly curved spine (fig. 1). Spines of latero-ventral surface of forefemur forming a single series, spines arising from elevations, and slightly curved forward. Prothorax shorter than mesothorax (15:21). Discal cell of forewing narrow, slightly over five times as long as greatest width, as long as costal cell; cross vein at about three fourths from base of longitudinal vein. Very similar to the male. Overall length 9 mm.

*Female genitalia*.—Seventh tergum broader than long; eighth shallowly v-shaped on upper margin (fig. 2), globular except for a shallow depression above and to each side of the median line.

*Allotype*.—Female, August 1955, Trelawny P., Windsor Cave; R. Bengry collector; in the collection of the Institute of Jamaica. Other material examined; two ♂♂, August 1955 and March 1960, T. H. Farr collector, and one paratype, female, in the senior author's collection, August 1955, R. P. Bengry collector; all specimens from Windsor Cave, Trelawny P.

The genitalia of the male of *Ploiaria umbrarum* are illustrated in figures 3, 4, 5, and 6. The drawing of the internal genitalia in figure 3 is diagrammatic and approximate; they consist of a slightly curved sclerotized phallobase (p), a Y-shaped connective (c), and a very long endosme (e) coiled inside the last segment.

***Metapterus fraternus* (Say) 1832**

Two specimens at hand, one ♂ from St. Andrew P., Half Way Tree, July 7, 1960, T. H. Farr collector and one ♀, from Fort Simmonds, January 1, 1945,

collected in a light trap, are so different from the described species that we thought it to be an undescribed new species. However, the male genitalia (figure 7) proved it to be a color form of *Metapterus fraternus* (Say). We are grateful to Dr. Petr Wygodzinsky for comparing the genitalia with that of typical material at his disposition.

***Ghilianella spinicaudata* Maldonado 1960**

Jamaica, holotype female

*Male*.—Dark brown with lighter tibiae. First antennal segment with ten narrow yellowish annuli more or less uniformly distributed; other segments unbanded. Interantennal spine yellowish above. Beak with apical half of first and second segments yellowish. Fore coxa and femur irregularly spotted with yellowish. Mid and hind femora each with five incomplete yellowish annuli and many yellowish spots irregularly distributed. Mid and hind tibiae with two or three inconspicuous yellowish annuli on basal half. Abdominal terga each with a narrow yellowish area on base of lateral margin. Abdominal sterna irregularly spotted with yellow, spots more abundant and slightly larger after third visible sternum. Body and legs with very sparse short appressed pilosity.

Head granulose, granulations conspicuous. Interantennal spine moderately long, straight.

Thoracic segments sparsely granulate; relative length of segments; 27:19:10. Prothorax with humeral angles roundly produced upward. Claws of fore tarsi two, the inner very short and closely appressed to base of outer. Armature of forefemur with inner row consisting of alternating fine setae and short spines, the setae arising from wart-like bases. Outer row of spines similarly arranged but with more spines, with four longer spines forming a third row on the outside. In the female there is a fourth row more to the outside. First spine of forefemur slightly curved, at one and one-half times its length from tip of trochanter. Basal half of forefemur gradually thickened to first spine. Abdomen deeper than wide; without bulbous swelling; very slightly widening from base to apex of seventh segment. First tergum with well developed caudally inclined conical projection. Posterolateral angles of third to sixth terga slightly produced laterally; hind margin of terga angularly produced caudad and with a median wart, the wart on the sixth the biggest; surface of terga sparsely granulate. Seventh tergum as in figure 7, medianly longer than sixth, carinate, transversely corrugate on apical half; slightly widening to basal third, tapering to apical two-thirds and hence abruptly narrowing to apex; hind margin produced into a long spine that surpasses claspers by over a clasper length. Hind margin of second to fifth sterna straight; the sixth broadly and shallowly concave; of seventh straight with a very small median notch. Eighth sternum broad, visible on its entire width, hind margin straight, as in figure 9. Hypopygium opening upwards; upper lateral margin stepped, apical margin produced into a hook; base of hook projecting caudad and apex hidden by the clasper, hook standing clear from the hypopygium.

The species with males possessing a hook on the apical margin of the hypopygium are: *Ghilianella fenestrata*, *G. uncinata*, *G. patruela*, *G. gibbiventris*, *G. strigata*, *G. neivai*, *G. apiculata*, and *G. campulligaster*. Unlike *G. spinicaudata* the first five have bulbous abdomens. The shape of the seventh tergum and hypopygium easily separates *G. spinicaudata* from the last three. Will run to first

part of couplet 22 in the senior author's key to the males. Can be separated from *apiculata* as follows:

. . . almost glabrous; hypopygium opening upward, apical hook of hypopygium pointing cephalad; 19 mm. long . . . *G. spinicaudata*

. . . vestiture unusually abundant; hypopygium opening caudad; hook of hypopygium pointing upward; 27 mm. long . . . *G. apiculata*

*Allotype*.—Male, Jamaica, Portland, Green Hills rain forest, August 3, 1956, B. and B. Valentine collectors. In the senior author's collection.

#### *Ghilianella signoreti* (Dohrn) 1860

There are 24 specimens, including both sexes, in the collection of the Institute. The male hypotype is included among these. This species has been collected from St. Andrew, St. Catherine, Clarendon, Manchester, Westmoreland, Trelawny, and St. Ann Parish.

#### *Ghilianella spinata* Maldonado 1960

Described from Jamaica. Type material in the senior author's and the Institute of Jamaica collections.

#### Subfamily TRIATOMINAE

#### *Nesotriatoma* Usinger 1944

This genus was erected by Usinger (1944) to include *Triatoma flavida* Neiva 1911 and *Nesotriatoma bruneri* Usinger 1944. Wygodzinsky (1949) later considered *N. bruneri* as a synonym of *N. flavida*. The genus can be separated from other triatomine genera by the angulate humeri and spines at base of the scutellum. So far the genus is limited to Cuba and Jamaica.

#### *Nesotriatoma obscura*, new species

*Male*.—General color blackish brown, with brownish femora, and margins of connexivium spotted apically with yellow or light brown (fig. 10).

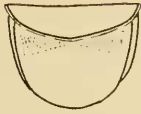
Head blackish brown; eyes brown, first antennal segment blackish brown, second and third brownish; first rostral segment blackish brown, second blackish brown with apex brownish, third brownish. Neck blackish brown above; ventrally and laterally, brownish. Mesonotum blackish brown; projection of anterolateral angle, lateral carina and discal longitudinal carina of posterior lobe brownish; ventrally and laterally blackish brown. Scutellum blackish brown, extreme tip brownish. Mesothorax and metathorax laterally and ventrally blackish brown. Coxae, trochanters, and femora blackish brown and shiny. Tibiae and tarsi light brown, contrasting with the darker femora. Hemelytra blackish brown, with small yellow-

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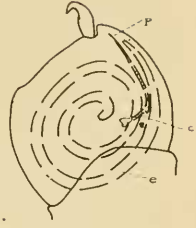
*Ptoiaria umbrarum* McAtee and Malloch. Fig. 1, female, allotype, fore trochanter, lateral view; fig. 2, female, allotype, caudal end of abdomen; fig. 3, male, last abdominal segment, lateral view; p-phallobase, c-connective, e-endosome; fig. 4, male, last abdominal segment, dorsal view; fig. 5, male, last abdominal segment, ventral view; fig. 6, male, phallobase and "connective," lateral view. *Metapterus fraternus* (Say). Fig. 7, male, aedeagus, lateral view. *Ghilianella spinicaudata* Maldonado, male. Fig. 8, male allotype, seventh tergum, dorsal view; fig. 9, male allotype, last abdominal segments, lateral view. *Nesotriatoma obscura*, n. sp. Holotype, male.



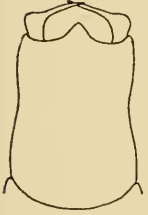
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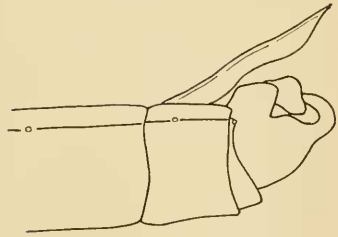
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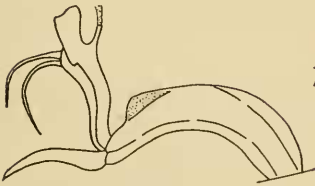
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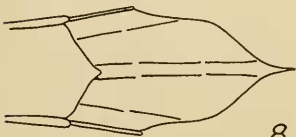
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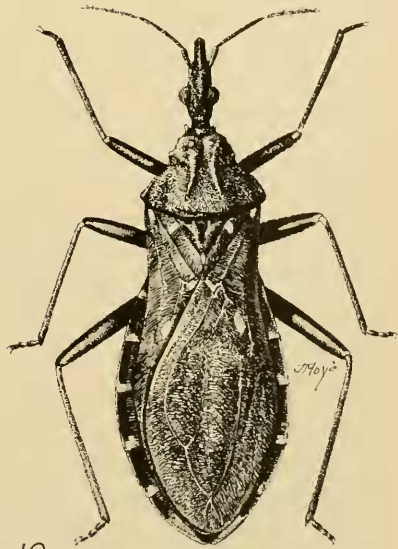
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ish areas as follows: basally where claval suture and Sc meet, on clavus near basal angle of scutellum, on a-a cross vein and on M on base of membrane. Abdominal sterna blackish brown or brownish. First five connexivial segments ventrally and dorsally with apical third yellowish or tawny; last segment brownish from basal third to apex. Genital segments blackish brown. Spiracles yellowish.

Pilosity on body very scarce, appressed, brownish; more abundant on legs, ventrally on abdomen, and in genital segments.

Head including neck, longer than thorax, as in figures 11 and 12. Eyes on dorsal aspect slightly over one half width of interocular space (5:8). Anteoocular space to apex of antennal socket less than twice as long as postocular space (10:6). Ocelli conspicuous, each in a shallow depression; closer to posterior margin of head than to posterior margin of eye. Rostrum glabrous; relative lengths of segments: 11:26:7, first segment reaching to apex of antennal tubercle, second to neck, and third to middle of stridulatory groove. Head and thorax dorsally conspicuously granulate; granulations small and somewhat elongate on thorax. Antennal segments: 11:31:21:15; first two with very short pilosity, last two with scattered long pilosity; first segment thicker than second, second thicker than last two. Pronotum wider than long (50:32); constriction before middle; anterior lobe with humeral angles sharply produced; with two discal and one posterolateral small tubercles; medianly sulcate, sulcus deeper where it meets transverse pronotal constriction; surface mostly granulated and with some smooth areas forming an irregular pattern; laterally corrugate. Posterior lobe with two divergent longitudinal carinae on disc; conspicuously and thickly covered with somewhat elongate granulations; posterolateral angle subangularly produced as a plate; lateral margin carinate. Scutellum (fig. 13) slightly longer than wide at base; with a pair of short, anteriorly directed slender tubercles at middle of base reaching just above hind margin of pronotum; with a small discal depression; with a small lateral conical projection; surface rugose; apex elongate, horizontal, cylindrical.

Front wings reaching to before apex of abdomen. Abdominal sterna finely transversely striate. Connexivium well developed; apical angles of all segments very slightly produced so that the margin is not a straight line. Overall length 14 mm.

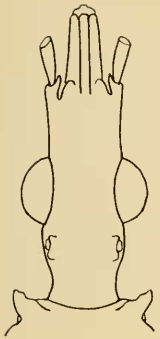
Genital segments as in figures 14 and 15.

*Female*.—Very similar to the male in coloration and dimensions. Variations in coloration as follows: eyes gray or silvery; longitudinal carina on posterior lobe of pronotum concolorous with disc; yellowish spots on base of wing less conspicuous, on base of membrane missing. Penultimate connexivial segment as in the male or unmarked; last segment with connexivium uniformly blackish brown or brownish on apical half.

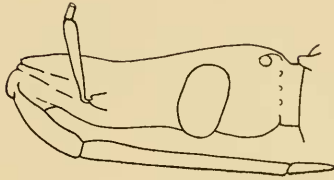
Pygidium triangular as in figures 16, 17, 18; densely pilose. Overall length 16 to 17 mm.

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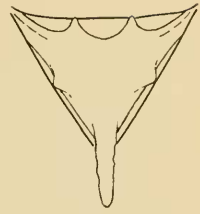
*Nesotriatoma obscura*, n. sp. Fig. 11, holotype, male, head from above; fig. 12, holotype, male, lateral view of head; fig. 13, holotype, male, scutellum; fig. 14, holotype, male, genital segments, lateral view; fig. 15, holotype, male, genital segments, caudal view; fig. 16, female allotype, genital segments, lateral view; fig. 17, female allotype, genital segments, dorsal view; fig. 18, female allotype, genital segments, ventral view. *Nesotriatoma flavida* (Neiva). Fig. 19, dorsal aspect; fig. 20, scutellum.



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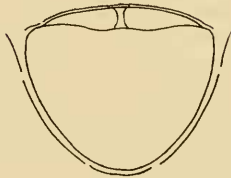
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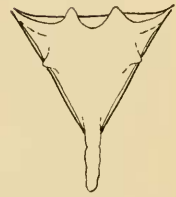
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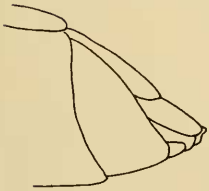
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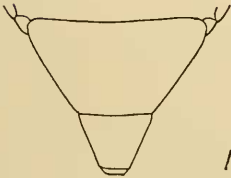
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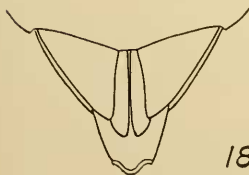
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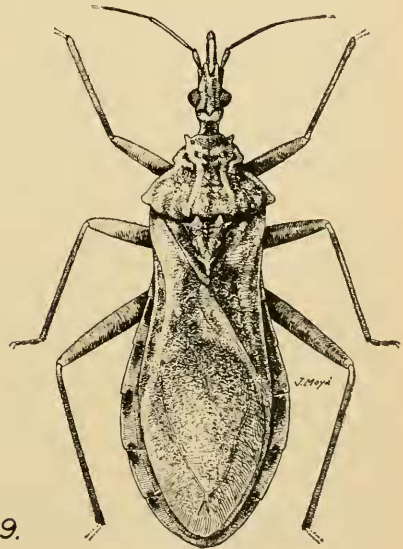
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*Holotype*.—Male, Mandeville, Manchester P., Jamaica, B. W. I., March 1961, E. S. Panton collector, deposited in the Institute of Jamaica. Allotype same locality, September 1960, E. S. Panton collector, on back of label reads: "bit a woman while she was sleeping"; in the senior author's collection. Paratype, female, same collecting data as allotype, in the Institute of Jamaica, specimen crushed; very similar to allotype, slightly paler, and with the last connexival segment light on apical half.

The genus *Nesotriatoma* now includes two species, namely, *N. flavida* and *N. obscura* n. sp. The first is light brown (fig. 19) and the latter blackish brown with small yellowish areas as described above; the shape of the scutellum is different as can be seen from figures 20 and 21.

***Triatoma rubida* (Uhler) 1894**

This species is listed by Gowdey as occurring in Jamaica.

***Triatoma rubrofasciata* (DeGeer) 1773**

*Material examined* (from the collection of the Institute of Jamaica).—One ♀, January 1952, Half Way Tree, F. A. McDermott collector, one ♀, June 1951, Sallowfield, C. B. Lewis collector; one ♂, no other data; one ♂, January 1951, Kingston, B. N. Fletcher collector; one ♀, September 1954, Kingston, G. R. Proctor collector; one ♂, February 1952, R. Rattray collector; one ♀, September 1956, Institute of Jamaica, Kingston, T. H. Farr collector. At the Department of Agriculture, Kingston, there are three specimens collected by C. G. Gowdey as follows: one from Hope Garden, October 1920, one from Blue Castle, February 1922; and one from Hill Gardens.

SUMMARY

Three species of Triatominae and eleven of Emesinae (Reduviidae) are listed as occurring in Jamaica, namely: *Nesotriatoma obscura* n. sp., *Triatoma rubrofasciata*, *T. rubida*, *Emesa mantis*, *Emesopsis nubilus*, *Empicoris rubromaculatus*, *E. armatus*, *E. errabundus*, *Ploiaria rufoannulata*, *P. umbrarum*, *Ghilianella spinicaudata*, *G. spinata*, *G. signorcti*, and *Mctapterus fraternus*.

Besides the new species of *Nesotriatoma* the male allotypes of *Ploiaria umbrarum* and *Ghilianella spinicaudata* are described.

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